Application Number 10/583,242
Response to the Office Action dated September 18, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A step pile fabric obtained by treating with dry heat a pile fabric, the pile fabric comprising an acrylic shrinkable fiber and a non-shrinkable fiber, ~~which~~ wherein the acrylic shrinkable fiber comprises an acrylic copolymer comprising ~~0.5 to 10 wt% of a sulfonic acid group-containing monomer~~ 60 to 99 parts by weight of copolymer (I) comprising:

35 to 98 wt% of acrylonitrile, a sulfonic acid group-containing monomer in an amount up to 5.0 wt%, and 2 to 65 wt% of at least one of other vinyl monomers, and

1 to 40 parts by weight of copolymer (II) comprising:

acrylonitrile in an amount up to 90 wt%, 2 to 40 wt% of a sulfonic acid group-containing monomer, and at least one of other vinyl monomers in an amount up to 80 wt%,

wherein copolymers (I) and (II) are 100 parts by weight in total,

and the acrylic shrinkable fiber is dyeable ~~dyed~~ at 55 to 85°C, ~~with dry heat at 110 to 150°C for 20 minutes or less,~~

the acrylic shrinkable fiber having a shrinkage percentage of 18 % or more calculated by ~~the~~ a following formula (1):

Shrinkage percentage (%) = 100 x (1 – Sa/Sb) (1)

wherein Sb represents a pile length of ~~the~~ a down hair component of the acrylic shrinkable fiber before ~~the~~ a dry heat treatment at 110 to 150°C for 20 minutes or less, and Sa represents a pile length of the down hair ~~part~~ (component) after the dry heat treatment.

2. (Currently Amended) The step pile fabric according to claim 1, wherein the acrylic shrinkable fiber comprises an acrylic copolymer and is ~~dyed~~ dyeable with a cationic dye.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) ~~A~~ The process for producing the step pile fabric according to claim [[2]]8, ~~comprising the steps of:~~

wherein ~~dyeing an~~ the acrylic shrinkable fiber ~~comprising an acrylic copolymer comprising 0.5 to 10 wt% of a sulfonic acid group-containing monomer~~ is dyed with a cationic dye ~~at 55 to 85°C; blending the acrylic shrinkable fiber with a non-shrinkable fiber to produce a pile fabric; and treating the resulting pile fabric with dry heat at 110 to 150°C for 20 minutes or less to cause the acrylic shrinkable fiber to have a shrinkage percentage of 18% or more~~.

7. (Cancelled)

8. (New) A process for producing a step pile fabric, obtained by treating with dry heat a pile fabric, the pile fabric comprising acrylic shrinkable fiber and a non-shrinkable fiber,
wherein the acrylic shrinkable fiber comprises an acrylic copolymer comprises 60 to 99 parts by weight of copolymer (I) comprising:

35 to 98 wt% of acrylonitrile, a sulfonic acid group-containing monomer in an amount up to 5.0 wt%, and 2 to 65 wt% of at least one of other vinyl monomers, and
1 to 40 parts by weight of copolymer (II) comprising:

acrylonitrile in an amount up to 90 wt%, 2 to 40 wt% of a sulfonic acid group-containing monomer, and at least one of other vinyl monomers in an amount up to 80 wt%,
wherein copolymers (I) and (II) are 100 parts by weight in total,
comprising the steps of:

dyeing the acrylic shrinkable fiber at 55 to 85°C;

blending the acrylic shrinkable fiber with a non-shrinkable fiber and forming a pile fabric; and

treating the resulting pile fabric with dry heat at 110 to 150°C for 20 minutes or less and shrinking the acrylic shrinkable fiber to have a shrinkage percentage of 18% or more by a following formula (I):

$$\text{Shrinkage percentage (\%)} = 100 \times (1 - Sa/Sb) \quad (1)$$

wherein Sb represents a pile length of a down hair component of the acrylic shrinkable fiber before the dry heat treatment, and Sa represents a pile length of the down hair component after the dry heat treatment.